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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/979,564 | 11/14/2001 | Hans Bloecher | 3926.033 | 2814 |

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EXAMINER

ISSING, GREGORY C

ART UNIT

PAPER NUMBER

3662

DATE MAILED: 09/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|-------------------------------|------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 09/979,564 | BLOECHER, HANS |
| | Examiner Gregory C. Issing | Art Unit 3662 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 10 July 2003.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 11-20 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 11-20 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

- Certified copies of the priority documents have been received.
- Certified copies of the priority documents have been received in Application No. _____.
- Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.

4) Interview Summary (PTO-413) Paper No(s) _____.

5) Notice of Informal Patent Application (PTO-152)

6) Other: _____

1. Drawings are not provided to the draftsman until application is allowed. Thus, a PTO-948 from the draftsman will not be provided until such time.
2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 11 and 17 are not clearly claimed. Figure 3 is the only drawing which shows a network of hybrid junctions. No drawings show a network of phase shifters. Thus "connected via a network of phase shifters or hybrid junctions" does not clearly define the subject matter. Furthermore, the limitation "wherein at least one of the phase shifters or hybrid junctions of the network is switchable" fails to clearly set forth the subject matter for reasons set forth above. The hybrids existent in the disclosed embodiment, Figure 3, include hybrids 4, 13 and 14, whereas page 7, states that it is conceivable for the switch 6 to be realized by means of a switching of a 3dB hybrid junction.

Claim 12 is not clearly claimed with respect to "a second set of antennas (7) through (10)." It is not clear if "(7) through (10) is inclusive of (8) and (9). The language "the components" lacks a proper antecedent basis.

In claim 14, the language "the switch (16)" should be "the switch (6)."

In claims 16 and 20, the language "in the additive complete diagram of the antenna arrangement" and "in the additive diagram of the antenna arrangement" fails to clearly define the subject matter. It is not understood. It is not clear what "one of the two main lobes" is or

represents. With respect to the first problem, the following language is suggested “a combined radiation pattern of the antenna array and the additional antenna element at least partially suppresses . . .”

Claim 20, lines 7-11 are not understood. Additionally, are “the entry” and “reception” direction the same and if so appears to be redundant.

4. The rejections under 35 USC 102 regarding Ammar et al and Smith are set forth in the previous Office Action. The rejections with regard to Accoraci et al (no further differential patterns) and Kreinheder (no switched hybrids) are withdrawn. The rejections under 35 USC 103 are set forth in the previous Office Action.

5. Claims 11, 17 and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Ammar et al.

The rejection is set forth in the last Office Action.

Applicants argue that Ammar et al do not disclose “phase shifters or hybrid junctions being switchable so that the antenna mean radiation pattern or directional characteristics exhibit further different diagrams by the resulting change of the phase behavior due to the selection of the individual elements.”

The applicants’ arguments are not convincing for the following reasons. Ammar et al disclose signals representative of a sum, an azimuthal difference and an elevational difference by selectively controlling switched paths comprising phase shifts; thus, multiple differential beams are provided by controlling the switched elements.

6. Claims 11, 17 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Smith.

The rejection is set forth in the last Office Action.

Applicants do not address the rejection over Smith. Therefore the rejection stands.

7. Claims 16 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ammar et al or Smith in view of either one of Masak et al or Pierrot.

The rejection is set forth in the previous Office Action.

The applicants argue that the rejection incorporating Masak and Pierrot should be withdrawn since neither of Masak and Pierrot is relevant to the claims and since they are allowable by virtue of their dependency on allowable base claims.

The argument with regard to Masak et al and Pierrot et al are not convincing since the applicants do not argue the claim language. The claim merely sets forth an additional antenna element spaced from the antenna array such that the combined output patterns of the two antennas suppresses a part of an antenna lobe. Each of Masak et al and Pierrot et al suggest at least one additional element spaced from an array for the purpose of suppressing a signal in a sidelobe. Thus, the applicants' arguments are not convincing.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Forsberg, which was provided in an IDS by the applicants discloses a monopulse antenna providing a sum, azimuth difference and elevation difference beam and having a network of phase shifters 141/241 and hybrids, wherein the phase shifters are controllable via lines 163/165 to control the directions of the difference beams. Elia et al disclose a monopulse antenna comprising sum, azimuth difference and elevation difference patterns wherein the network between the input feeds (43, 45, 47 and 49) and the outputs (elevation difference 101, sum 103 and azimuth difference 99) comprises a network of hybrid junctions and phase shifters

wherein the phase shifters 87, 89, 91, 93 are controllable. Thus, switchable control of phase shifters to effect different directional beam patterns is known.

9. Claims 12-15 and 19 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

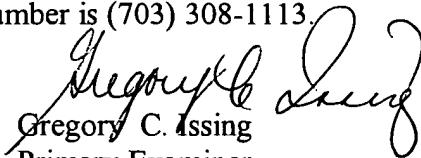
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory C. Issing whose telephone number is (703)-306-4156. The examiner can normally be reached on Mon-Thurs 6:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Tarcza can be reached on (703)-306-4171. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Art Unit: 3662

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113


Gregory C. Issing
Primary Examiner
Art Unit 3662

gci